REMARKS

In the Office Action mailed January 19, 2005, the disclosure was object to because of the informalities noted in numbered paragraph 1 of the Office Action mailed January 19, 2005. To correct those informalities the Applicant is tendering herewith a new substitute specification in both clean and marked up copies, to correct the noted informalities, and Applicant believes that no new matter is being added thereby.

Claim 1 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention, for the specific reasons set forth in numbered paragraph 3 of the Office Action mailed January 19, 2005. By the foregoing proposed amendments to claim 1, Applicant believes that it has address all of the deficiencies specifically noted by the Examiner in numbered paragraph 3 of the Office Action mailed January 3, 2005.

Claim 1 was also objected to because of the informalities noted in paragraph 4 of the Office Action mailed January 19, 2005. The Examiner will please note that the proposed amendments to the claims have addressed the informalities noted by the Examiner in numbered paragraph 4 of the Office Action mailed January 19, 2005.

Claims 1-4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Dubanchet in view of Christensen et al. To rebut this continuing rejection of claims 1-4 over the Dubanchet reference, Applicant is tendering herewith his Rule 1.132 Declaration, which, inter alia, provides factual evidence of record to support the Applicant's contention that the claimed process and product differs from Dubanchet's process and product in nutritional value and product stability.

For all these foregoing reasons, Applicant respectfully requests entry of the foregoing amendments, reconsideration of the present application in light thereof, and in light of the foregoing remarks, and then allowance of all pending claims 1-3, as amended, over all the prior art of record.

Respectfully submitted,

By: _____

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#355104

Method of Production of a Meat Product Containing Olive Oil

The present invention involves the production of ~~goods based on~~ meat products with ~~the main features being~~:

a. the direct incorporation ~~use~~ of olive oil ~~instead of the usual practice~~ in replacement of animal fat ~~(fatty tissue)~~
b. the use of ~~thin bonny muscular tissue~~ lean pork meat
c. the addition of processing aids ~~special subsidiary material; and~~
d. the ~~help of~~ appropriate processing technology ~~technological procedures and process that are developed~~ to:

- obtain a ~~solid~~ stable emulsion type meat product incorporating pure virgin olive oil, able to undergo thermal processing without phenomena of oil extrusion; ~~meat paste of film structure, apt to undergo any suitable caloric process, with a further target being the embodiment and firm connection of olive oil and after the coagulation of the proteins / water / olive oil; and~~
- obtain a product which retains the original nutritional and sensory properties of olive oil. ~~The maximum possible maintenance of organic receptive, scenic chemical and nutrient features of the differentiation determinant olive oil.~~

BACKGROUND OF THE INVENTION

Comminuted sausages are considered an emulsion type of product in which meat protein, fat and water construct a stable matrix. ~~Cooked pork meats of contracted meat constitute a structural "emulsion" with the participation of the essential ingredients of proteins of the meat, water (of the meat + additional water) and additional fat (pork fatty tissue).~~

Emulsion ~~the~~ stability ~~of the "emulsion"~~ is a function ~~depends mainly~~, among other variables ~~factors~~, of the water and fat holding capacity of the meat used ~~on the connective ability of the meat used to retain water and to digest the additional fat~~.

Especially meat ~~muscular~~ proteins, and more specific the salt soluble fraction (actin, myosin and their complex ~~actomyosin~~) which ~~that~~ represent ~~the main part of~~ approximately 60% of total protein content ~~the muscular occiputs~~ contribute, to the emulsion stability, ~~of the "emulsion"~~, as in their hydrated state ~~condition~~ they function as a protective frame of the incorporated ~~embodied~~ fat, which comprises ~~is~~ the non-continuous ~~ing~~ phase of the emulsion and the main factor of product ~~their non-~~destabilization.

SUMMARY OF THE INVENTION

The obtainment of a stabilized embodiment of the olive oil ~~fat~~ (oil globules) ~~(fat orbs)~~ in the "emulsion" constitutes a technological target of this invention, which is dealt ~~faced~~ with known combined techniques, ~~which affect positively in this direction and include the adjustment of the parameters,~~ such as ~~the specific~~ selection and preparation of meat, pH regulation of the meat, the quantity of added ~~additional~~ salt, the use of processing aids ~~subsidiary technology~~, the process conditions of meat paste

creation ~~creation of meat – paste~~, thermal processing ~~the timetable of caloric process~~ and cooling ~~freezing~~ of the final product, etc.

Nevertheless, the incorporation ~~embodiment~~ of olive oil, in comparison to the traditional ~~with the classic~~ addition of pork fat, as long as it is tested with classic techniques, runs into difficulties of instability or presents ~~created of meat – paste –~~ tendencies of instability, not only of the ~~"emulasion"~~ meat-paste but ~~also~~ of the final product as well, that usually appear oily ~~shows the appearance of "de – oil"~~.

Consolidated well-known techniques of indirect embodiment of vegetable oils ~~fats~~ are known, which:

- include a procedure of preliminary thermal ~~caloric~~ processing of olive oil at temperatures over ~~in levels of~~ 100°C twice.

This is especially so in the case of olive oil, whose role in nutrition of humans is distinctive among ~~seed oils and other~~ vegetable oils ~~fats~~, and also internationally renowned for its beneficial features ~~of its vegetable ingredients~~ (reference to omega fatty acids and their protective role, low cholesterol content, tocopheroles ~~toko – phenols~~ and polyhenols ~~poli – phenols~~ with the later two acting as antioxidants ~~and their role~~).

Therefore, it is thought to be essential,

on one hand, that its participation as an ingredient ~~of~~ substituting ~~–ion~~ ~~of~~ animal fat in thermally processed ~~cooked~~ pork meats products (~~products of caloric process of contracted meat~~), to be achieved under especially protective conditions, so that maximal ~~–um~~ protection ~~possible transfer~~ of its characteristics are secured in the product;~~on the hosting product could be secured;and~~

on the other hand, that the process of incorporation ~~embodiment~~ ensures the traditional technique of thermally processed ~~producing cooked~~ pork meats products, and that scientific facts will systematically be taken into consideration based on the characteristics of protein, fat and oils as well as the potential of their in-between connection depended on these characteristics.

The fact that the stability of so called meat emulsions is affected by the following parameters ~~facts~~, must also be taken into account:

- the source and the composition of the incorporated ~~embodied~~ fat; and
- its ~~scenic~~ chemical and sensory characteristics, including ~~such as~~:
  - fatty acid ~~the~~ profile ~~of fat acids~~ (kind and degree of saturation)
  - the Solid Fat Index (SFI)
  - the relation of poly-unsaturated fatty acids (PUFA), mono-unsaturated fatty acids (MUFA) and saturated fatty acids (SUFA). ~~in the applicable temperatures in the different stages of production~~

It is obvious that from technological aspect the differences between pork fat and olive oil should be taken into consideration when creating a stable emulsion.

In the critical production temperatures (0-4 °C to 71 °C) as well as ~~but also~~ in the temperature range during cooling and during storage ~~of freezing (after caloric process)~~

~~in addition to the later maintenance~~ (3-7 °C) ~~of the product~~, the ~~it's~~ SFI plays a very ~~has a very~~ significant role.
In the case of olive oil, its characteristics presuppose incorporation ~~embodiment~~ under specific conditions consisting of ~~that consist of~~:

- the creation of the maximum possible incorporation ~~embodiment~~ of oil through ~~with~~ mechanical process (mixing ~~-ture~~, homogenization ~~similitude~~ of the participating ~~ed~~ ingredients);
- the estimation of the ideal relation ~~quantitative~~ between these ingredients so that the maximum possible soaking and ~~maintenance of~~ oil retention by ~~in~~ the emulsion is combined at the same time with maximal water content absorption by protein ~~maximum possible absorbance of additional water (relation fat / proteins, water of proteins~~; and
- the creation of a stable "waterproof" protein complex surrounding ~~round~~ the fat globules ~~orbs~~ without ~~the~~ application of high temperatures for ~~the transformation of the~~ protein transformation, with the application of mechanical process under selected conditions. ~~with the application of vacuum and temperature in the phase of mixture and degree of assimilation — with the maximum possible spreading and the size of fat — orbs.~~

In the end, one significant aim is the insurance of a stable behaviour of the meta-paste "emulsion" during ~~in~~ the phases of thermal ~~calorie~~ processing, cooling ~~the later freezing of the product, the behavior of the product in a possible~~ and cutting and packaging ~~in vacuum~~, of the product and during the maintenance under low temperature ~~in~~ conditions ~~of freezing~~.

The aim of the present invention is the production of goods based on thermally processed ~~on~~ meat ~~of caloric process~~(cooked products of pork meat – sausages – salamis ~~of contracted meat~~):

- with direct "cold" incorporation ~~in frost embodiment~~ of olive oil and maximum possible substitution of animal fat;
- with the addition of combined processing aids; ~~subsidiary technology; and with~~
- the application of a special technological process.

DETAILED DESCRIPTION OF THE PREFERRED INCORPORATION

This aim is achieved by ~~with the~~ mixing ~~-ure of meat of~~ low fat (lean) meat ~~content~~ in "cool" ~~frost~~ with olive oil in combination with the use of vegetable protein, milk protein, polyphosphates ~~poli- phosphoric salts~~, water and salt.

In this way, the present invention offers pork meat products with olive oil and a method for their production with in cold ~~frost~~ mixing of olive oil, lean ~~non- fat~~ meat and water.

Thin chopped lean ~~non-fat~~ meat at a ~~of~~ temperature of 0 °C is mixed with water ~~H2O~~ at ~~of temperature~~ -2 °C in a mixing ~~-ure~~ machine with simultaneous addition of salt. Next, are ~~is~~ inserted polyphosphates ~~poli-phosphoric salts~~, preservatives and spices. After all these are mixed, ~~added~~ gradually ~~are the~~ vegetable protein, ~~the proteins of~~

milk protein and starch are added. When the temperature of the mixture reaches ~~is~~ 2 °C the olive oil is inserted. ~~The~~ Mixing ~~ure~~ continues with simultaneous application of a vacuum of 960 mbar for 3 min in order to remove ~~aiming to deduct the closed in the mixture~~ oxygen and prevent ~~in the avoid~~ oxidation, ~~the mixture continues~~ until ~~the~~ temperature reaches ~~is~~ 4 °C. The entire mixing time ~~of mixture~~ is 15 min and the absorbing power 26KW. The mixture then goes to a filling machine where ~~it~~ is encased with simultaneous application of a ~~vacuum~~ 1000 mbar vacuum with absorbing power of 7KW, and later on ~~it~~ is pasteurized to ~~in~~ 71 °C. The entire time of the thermal ~~caloric~~ process depends on the ~~diameter on the~~ product diameter and ranges from 1 to 3 hours. Following ~~After~~ pasteurization, the product is cooled ~~frozen~~ in chilling ~~freezing~~ chambers of ~~with~~ temperatures ranging from ~~of~~ -2 °C ~~up~~ to +2 °C.

~~The~~ Pork meat products with olive oil that are produced according to this invention, have ~~an~~ excellent stability as far as structure is concerned (compactness) due to the use of lean ~~of thin~~ meat, application of low temperatures and ~~their~~ production under ~~in~~ vacuum. The sensory characteristics ~~scenic chemical features~~ of olive oil, incorporated in ~~which~~ these products ~~have~~, remain unchangeable, because of the low temperature used ~~which are enforced~~ during the production process ~~productive procedure~~.

ABSTRACT

Method of pork meat products production ~~of goods~~ based on ~~meat~~ (~~products of~~ cooked ~~pork meats~~ sausages – salamis of comminuted ~~contracted~~ meat) with direct incorporation ~~embodiment~~ of olive oil and maximum possible ~~substitution of~~ animal fat substitution, which includes the following phases ~~stages~~:

a. Mixing ~~ure~~ of lean ~~thin~~ pork meat with water ~~H2O~~, salt, polyphosphates ~~poli-phosphoric salts~~, preservatives, vegetable proteins, milk proteins and starch; b. Addition ~~insertion~~ of olive oil and ~~continuation of~~ mixing ~~ure~~; c.the mixture is encased with simultaneous application of vacuum and is pasteurized ~~-ation~~; d. cooling of ~~freeze~~ the product.

Products based on meat with incorporation ~~embodiment~~ of olive oil, which are produced according to this method, have an excellent stability as far as structure is concerned (compactness) and the sensory characteristics ~~scenic- chemical features~~ of olive oil which these products contain remain unchangeable.